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Matthias St. John
Executive Officer
North Coast Regional Water Quality Control Board
5550 Skylane Blvd. STE A
Santa Rosa, CA 95403-1072

Dear Mr. St. John:

We received your letter dated April 27, 2015 reviewing the draft Environmental Impact Statement (DEIS) for the Westside Fire Recovery Project. Your letter expressed concern that the preferred Alternative 2 would have potentially significant impacts to water quality and would not be eligible for coverage under the *Waiver of Waste Discharge Requirements for Nonpoint Source Discharges Related to Certain Federal Land Management Activities on National Forest System Lands in the North Coast Region* (Order No. R1-2010-0029). In response to comments received on the DEIS the Forest Service has developed a new preferred Alternative 3 modified that addresses the issues raised in your letter. A draft Waiver application for Alternative 3 modified is enclosed that describes how the proposal meets the 18 conditions for coverage under category B. Below are the five comments in your letter with our responses explaining how each concern is mitigated by Alternative 3 modified. Supporting information can be found in the draft Waiver application.

Comment #1:

Alternative 2 proposes about 3,920 acres of salvage units (about 2,000 acres of salvage logging) on steep, weathered granitic lands in Riparian Reserves. No salvage logging is proposed on inner gorges, active landslides or toe zones of dormant landslides. Also proposed is about 960 acres of site preparation and planting, 4,395 acres of roadside hazard tree removal, and 3,940 acres of fuels treatment on unstable lands considered to be Riparian Reserves. Alternative 2 also proposes construction of new log landings within aquatic Riparian Reserves and the reuse of existing log landings within Riparian Reserves. The number of new and reused landings could not be determined from the DEIS. These activities in Riparian Reserves may result in significant impacts to water quality, and the draft EIS has not adequately proposed mitigation measures to reduce impacts to less than significant levels.

Response to Comment #1:

Activities proposed in riparian reserves for alternative 3 modified have been greatly reduced from those proposed in alternative 2. Salvage harvest, site prep, and tree planting would occur on about 1,973 acres of unstable lands inside geologic riparian reserves. Site preparation and tree planting in burned young managed stands would include an additional 852 acres of riparian

reserves with 398 acres on unstable lands inside geologic riparian reserves. There is no increase in landslide risk even at the site scale from salvage harvest on unstable lands (see enclosed Geology Report). The removal of fire-killed trees is not likely to cause measurable changes in hillslope hydrology as these trees no longer transpire or intercept precipitation. The trees being removed will lose half their root support three years after the wildfire and will have nearly no effective root support after about 8 years. So the removal of fire killed trees will not reduce root strength. The site preparation and reforestation will decrease the time needed to reestablish conifer forest on unstable lands. The reduction in landslide risk will reduce the probability of sediment delivery to streams from landslides from unstable lands which will put watersheds on a trajectory to maintain and restore the sediment regime. This meets the Forest Plan Standard and Guideline 2-1 (page 4-18). It also helps to meet the Aquatic Conservation Strategy objective to maintain or restore sediment regimes.

Roadside hazard trees will be removed from 2,256 acres in Riparian Reserves, of which 1,914 acres will remove only widely spaced individual trees. In Riparian Reserves, all trees within 25 feet of streams will be retained unless it poses a threat to the road. Within one site tree distance from streams, trees between 14 and 26 inches in diameter would be removed to reduce fuel loads and trees larger than 26 inches would be retained on-site. On the downhill side of the road any tree greater than 26 inches that could reach the stream will be felled and left on the ground. No live vegetation that provides stream shade will be cut. Equipment use in riparian reserves would be restricted to the running surface of roads.

The project proposes fuels reduction activities within 3,594 acres of Riparian Reserves. These treatments will reduce the potential for water quality impacts from future wildfires. Most of the acres are prescribed fire treatments that will mimic a low intensity backing fire, except for handpiles where higher intensity may occur to consume pile material. Potential impacts from pile burning will be reduced by limiting the area with pile burn scars to no more than 30% of the riparian reserve. Burn piles will have a 30 foot buffer on intermittent streams and 70 feet on perennial streams, except in wildland urban interface areas where piles shall be more than 30 feet from perennial streams.

A total of six new landings and three existing landings are proposed within Riparian Reserves in Alternative 3 modified. Each proposed landing was inspected and approved only if they were on stable, already compacted landforms and slope positions, were in the outer zone of the RR, or were separated from stream channels by existing, stable road segments. Landings were not approved for use if they would require removal of vegetation that provides shade over streams or significant earthwork or fill moving. Project design features require that landings will not be constructed on toe zones of landslides, active landslides or inner gorges. During construction, material will not be sidecast into intermittent or perennial stream channels. At project conclusion landings will be configured for long-term drainage and stability by reestablishing natural runoff patterns, and covered with at least 80 percent effective soil cover.

Comment #2:

Reopening 69 miles of Level 1 roads for salvage logging and hazard tree removal may result in significant impacts to water quality, especially in cumulatively impacted watersheds that have burned with a moderate or high intensity.

Response to Comment #2:

A total of 34.4 miles of level 1 roads will be opened in Alternative 3 modified. The cumulative effect of reopening level 1 roads in watersheds with moderate and high severity burns is included in the results of the cumulative watershed effects models (see response to comment #3). Most of the roads are located in upslope areas or on ridgetops with a low risk of effecting stream channels. There are 4.8 miles of reopened level 1 roads, 1.2 miles of reopened decommissioned roads, and 0.1 miles of new temporary roads, and 0.2 miles of existing temporary roads located in riparian reserves. The influence of these roads on water quality will be limited due the following project design features:

- New temporary roads will not be constructed in any riparian reserve associated with stream channels, on toe zones of landslides, active landslides or inner gorges.
- Improvements to existing system roads in the project area (including level 1 roads) will avoid over-steepened road cuts where possible, minimize sidecasting, and maintain ditches, cross drains, and outsloped road segments.
- Roads will be watered as appropriate to maintain road fines on site. Other materials may be used for dust abatement as approved by the Forest Service.
- Upgrades or improvements to stream crossings will be built to Forest Plan standards.
- Activities which require culvert replacement or removal will occur during the least critical periods for water and aquatic resources when streams are dry or during low-water conditions; and in compliance with spawning and breeding season restrictions.
- Achieve 80% soil cover on hydrologically connected temporary roads and re-opened decommissioned roads within riparian reserves at the end of season of use. New temporary roads will also be sub-soiled (or tilled) after use.
- All temporary roads (new, existing or re-opened decommissioned roads) will have the takeoffs from system road obliterated or blocked to avoid unauthorized use. All temporary roads will be hydrologically stabilized including removal of culverts and fills at stream crossings, out-sloping of road surfaces, and proper construction of water bars. Erosion and sedimentation control structures (water bars) will be maintained and repaired per the guidance in the Forest Service Handbook 2409.15 R5 Supplement.

Comment #3:

Our staff analysis of Alternative 2 raises concerns that conducting salvage harvest and associated activities in watersheds already exhibiting elevated risks for cumulative impacts could result in significant impacts to water quality, especially in watersheds that have burned with a moderate or high intensity.

Response to Comment #3:

Alternative 3 modified has 28 7th-field HUC watersheds that are currently above the threshold of concern for at least one of the three cumulative effects models. Of these the proposed project will increase equivalent roaded area or sediment supply in 13 watersheds. As a ratio of the threshold the increases range from 0.01 to 0.08. Landslide risks are not increased for any 7th field watershed by the addition of the proposed project (see Geology Report pg. 6). Much of the increase in cumulative disturbance will be offset by controlling legacy sediment sources, and design features that will reduce the potential for adverse cumulative effects.

1. Restoration of 353 legacy sites. Legacy site treatments will prevent the project from exceeding the threshold of concern for ERA in Whites Gulch and reduce the USLE sediment supply towards the threshold. Legacy site treatments in the Lower East Fork of Elk Creek will reduce the current USLE sediment to below the threshold of concern.

2. The Burned Area Emergency Response repaired 175 legacy sites including some sites most of the watersheds that are over the threshold of concern.

3. Salvage harvest, site preparation and reforestation will decrease the time needed to reestablish conifer forest on unstable lands in geologic riparian reserves. The reduction in landslide risk will reduce the probability of sediment delivery to streams from landslides from unstable lands which will put watersheds on a trajectory to maintain and restore the sediment regime. This meets Forest Plan Standard 2-1 (page 4-18) and helps to meet the Aquatic Conservation Strategy objective focused on sediment regimes. Salvage harvest on unstable lands will be limited to skyline and helicopter treatments. See the enclosed Geology Report and amendment for a detailed risk assessment of activities on unstable lands.

4. The proposed project contains many design features and BMPs to reduce the potential for adverse effects to water quality (see the project design features in the enclosed draft Waiver application for a complete list):
    - Tractors and mechanical harvesters will be excluded from all riparian reserves except for hazard tree units where equipment use in riparian reserves would be restricted to the running surface of roads.
    - In riparian reserves within roadside hazard units, all trees within 25 feet of streams will be felled and retained on-site unless the material poses a threat to the road. Within one site tree, trees between 14 and 26 inches in diameter would be removed to reduce fuel loads; trees larger than 26 inches would be retained on-site. On the downhill side of the road within riparian reserves, any tree greater than 26 inches that could reach the stream will be retained. No live shading vegetation will be cut.
    - Fuels treatments (fuel breaks, fuel management zones, WUI fuel treatments etc.) that occur within Riparian Reserves will not cut live vegetation that provides stream shade.
    - Site Preparation that occurs in Riparian Reserves will be done by hand.

Comment #4:

None of the alternatives evaluated in the DEIS of the KNF Westside Fire Recovery Project propose to treat riparian zones that burned in the fire with a moderate or high intensity. Treating these riparian areas, perhaps by falling some trees and leaving them on the ground, and/or spreading slash on bare soils, could help to break up the hydrophobic crust, provide temporary sediment storage, and increase infiltration rates. Treating the riparian areas that burned at a high intensity could provide significant benefits to water quality, but were not included in the proposed action.

Response to Comment 4:

Alternative 3 modified includes treatments in Riparian Reserves that will increase ground cover in areas that burned at moderate and high severity. In hazard tree units within one tree height distance from streams, hazard trees larger than 26 inches would be felled and left on the ground. In fuels treatments slash with a diameter over 6 inches must be limbed and bucked into less than 8 foot lengths and left on the ground (not piled). Thus, treatments will increase soil cover and sediment retention capacity, as well as improve soil productivity, reducing erosion and sedimentation from areas that burned at high severity. Trees would be planted in some of the areas that burned at moderate and high severity. The roots of forest vegetation, especially trees, help stabilize slopes by providing additional strength to the soil. Once a conifer forest becomes established, the soil strength from root-support increases quickly and levels out after about 20 years. In salvage units an average of at least 5 to 20 pieces of coarse woody debris per acre will be retained as required by standard 6-16 in the LRMP to reduce the potential for soil erosion.

Comment #5:

The proposed project lacks an approved plan to treat legacy sediment sites.

Response to Comment #5:

We agree with the Regional Water Board's comment that given the huge size of the project area, treatment of all legacy sites is not a realistic goal. This is especially true when the Westside Project is added to the large number of future fuels projects planned over the next 5 years that will also have to treat legacy sites under Category B. Prioritization of watersheds is critical in order to focus limited restoration funding. A Forest-wide strategy to prioritize watersheds for legacy site treatments is proposed in section F. of the enclosed draft Waiver application. The KNF proposes to select at least one priority watershed in each of the three TMDLs in the project area. The Forest would commit to restoring all legacy sites in these priority watersheds:

- Elk Creek* (Klamath River TMDL)
- Seiad Creek (Klamath River TMDL)
- Whites Gulch (Salmon River TMDL)
- Sugar Creek (Scott River TMDL)

*Elk Creek includes three 6th-field HUC watersheds: the East Fork, Lower, and Upper Elk Creek watersheds

Only Elk Creek and Whites Gulch are located in the Westside Project boundary. About 150 sites would be treated in Elk Creek and 203 sites in Whites Gulch with some sites located outside of the Westside Project boundary. A total of 353 sites would be treated which is equivalent to 83% of the 423 road-related legacy sites inventoried in the project area. These sites are in addition to the 175 legacy sites in the project area treated for BAER. Legacy sites in the project area but outside of the priority watersheds would not be treated as part of the project except for sites on level 1 roads and existing temporary roads that will be repaired after use.

As outlined in the above response to comments alternative 3 modified is designed to reduce the potential for significant impacts to water quality and meet the conditions for a moderate risk

activity under category B of the Waiver. Legacy site treatments combined with project design features will minimize effects at the site-scale, with only minor effects at the watershed scale. The Forest Service requests the Regional Water Board review the enclosed draft Waiver application and reply with a determination for eligibility for coverage under category B of the Waiver.

For further information please contact Greg Laurie at (530) 841-4534 or glaurie@fs.fed.us.

Sincerely,

PATRICIA GRANTHAM
Forest Supervisor

cc: Tom Williams

Enclosures:

1. Project design features for water.
2. Cumulative watershed effects model results for ERA, USLE, and GEO
3. Legacy Site Inventory
4. Project area maps for the Happy Camp, Beaver, and Whites Fire areas
5. Maps of legacy sites to be treated in Elk Creek and Whites Gulch
6. Marking guidelines for fire damaged trees
7. Geology Report with amendment (risk assessment for unstable lands)